

We claim:

1. An aquaculturally-raised shrimp comprising DHA at a level higher than about 12.5  $\mu\text{g/g}$  fresh weight.
2. The shrimp of claim 1, wherein the DHA level is higher than about 25  $\mu\text{g/g}$  fresh weight.
3. The shrimp of claim 2, wherein the DHA level is higher than about 50  $\mu\text{g/g}$  fresh weight.
4. An aquaculturally-raised shrimp comprising carotenoids, wherein astaxanthin comprises less than about 80% of the total carotenoids.
5. The shrimp of claim 4, wherein the non-astaxanthin carotenoids comprise one or more carotenoids chosen from  $\beta$ -carotene,  $\gamma$ -carotene, lutein, lycopene, zeaxanthin, and canthaxanthin.
6. An aquaculturally-raised shrimp comprising a lutein level higher than about 5  $\mu\text{g/g}$  fresh weight.
7. An aquaculturally-raised shrimp comprising a Flavor Enhancer.
8. The shrimp of claim 7, wherein the Flavor Enhancer is chosen from bromophenol, 2,6-dibromophenol, 2,4,6-tribromophenol, and iodine.
9. The shrimp of claim 8, wherein the Flavor Enhancer comprises 2,6-dibromophenol at a level higher than about 0.06  $\mu\text{g}$  per kilogram fresh weight.
10. The shrimp of claim 8, wherein the Flavor Enhancer comprises 2,4,6-tribromophenol at a level higher than about 6  $\mu\text{g}$  per kilogram fresh weight.
11. The shrimp of claim 8, wherein the Flavor Enhancer comprises 2,6-dibromophenol and 2,4,6-tribromophenol at levels higher than about 0.06 and 6  $\mu\text{g}$  per kilogram fresh weight.
12. An aquaculturally-raised shrimp comprising a cholesterol level lower than about 8.0 mg per gram fresh weight.
13. The shrimp of claim 12, wherein the cholesterol level is lower than about 6 mg per gram fresh weight.
14. The shrimp of claim 13, wherein the cholesterol level is lower than about 1.0 mg per gram fresh weight.
15. An aquaculturally-raised shrimp comprising a DHA/EPA ratio greater than about 2.0.

16. The shrimp of claim 15, comprising a DHA/EPA ratio greater than about 2.5.
17. The shrimp of claim 16, comprising a DHA/EPA ratio greater than about 5.0.
18. An aquaculturally-raised shrimp fed an exclusively vegetarian diet comprising hydrolyzed plant protein and microalgae.
19. An Organic shrimp.
20. A 100% Organic shrimp.
21. An aquaculturally-raised shrimp that has been certified as Organic by the United States Department of Agriculture.
22. An aquaculturally-raised shrimp that has been certified as 100% Organic by the United States Department of Agriculture.
23. A shrimp feed comprising red rice yeast.
24. The shrimp feed of claim 23, wherein comprising a *Monascus* sp. red rice yeast biomass chosen from a whole biomass, a lysed biomass, a fraction of a whole biomass, and a fraction of a lysed biomass.
25. The feed of claim 24, wherein the *Monascus* sp. comprises *Monascus purpureus*.
26. A shrimp feed comprising components chosen from DHA, lutein, lycopene, zeaxanthin, bromophenols, and chlorophyll.
27. The feed of claim 26, comprising from about 10 to about 1000 mg/kg 2,6-dibromophenol.
28. The feed of claim 26, comprising from about 10 to about 1000 mg/kg 2,4,6-tribromophenol.
29. The feed of claim 26, comprising from about 10 to about 1000 mg/kg 2,6-dibromophenol, and from about 10 to about 1000 mg per kilogram 2,4,6-tribromophenol.
30. The feed of claim 26, comprising DHA, wherein the DHA level is greater than about 12.5 µg/g fresh weight.
31. The feed of claim 26, comprising lutein, wherein the lutein level is greater than about 5 µg/g fresh weight.
32. The feed of claim 26, comprising lycopene, wherein the lycopene level is greater than about 5 µg/g fresh weight.
33. The feed of claim 26, comprising zeaxanthin, wherein the zeaxanthin level is greater than about 6 µg/g fresh weight.

34. A method of producing an Organic shrimp comprising feeding microalgal DHA to shrimp.
35. A method of producing a shrimp comprising feeding to said shrimp one or more components chosen from microalgae enriched with DHA and microalgal extracts enriched with DHA.
36. The method of claim 35, wherein the microalgae are chosen from dinoflagelates and chitrids.
37. The method of claim 35, wherein the microalgae are chosen from *Crypthecodinium* sp., *Crypthecodinium cohnii*, *Schizochytrium* sp., *Schizochytrium aggregatum*, *Schizochytrium aggregatum* ATCC 28209, *Thraustochytrium roseum* ATCC 28210, *Thraustochytrium* sp. ATCC 26185, *Thraustochytrium* sp., *Thraustochytrium visurgense* ATCC 28208, *Pavlova* sp., *Tetraselmis* sp., and *Isochrysis* sp.
38. A method of producing a shrimp comprising providing the shrimp with a feed comprising a biomass enriched in one or more carotenoid.
39. The method of claim 38, wherein the biomass is chosen from one or more of microalgae, marigold extract, marigold petals, tomato extract, and processed tomato biomass.
40. A method of increasing the desirability of the flavor profile of a shrimp by adding one or more Flavor Enhancers to the shrimp's feed.
41. The method of claim 40, wherein the Flavor Enhancer comprises one or more bromophenols.
42. The method of claim 41, wherein the Flavor Enhancer is chosen from 2,6-dibromophenol and 2,4,6-tribromophenol.
43. A method of feeding a shrimp to a human or non-human animal, comprising providing for the animal's consumption a shrimp chosen from a high-DHA shrimp, a high carotenoid shrimp, a low cholesterol shrimp, and an Organic shrimp.